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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,610	01/23/2006	Daniel R. Smith	0275G-001165/US/NP	2649
27572 7590 12/08/2009 HARNESSE, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303				
EXAMINER				
OMCBA, ESSAMA				
ART UNIT		PAPER NUMBER		
3726				
MAIL DATE		DELIVERY MODE		
12/08/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/565,610

**Applicant(s)**

SMITH ET AL.

**Examiner**

Essama Omgba

**Art Unit**

3726

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 20-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 20-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-856)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Claim Objections***

1. Claim 22 is objected to because of the following informalities: in line 3, "position" should read --positioning--. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10 and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denham et al. (GB 2 401 661) in view of Waldron et al. (US Patent 6,227,433).

With regards to claim 1, Denham et al. discloses a method of connecting together at least two workpieces using a blind rivet (page 1, lines 3-11), the method comprising positioning the at least two workpieces (2, 32) in abutment (fig. 2A), positioning a blind side end face of a blind rivet against a first one of the workpieces (fig. 2A0 and applying a biasing force thereto, rotating the rivet at a speed while maintaining the biasing force (page 3, lines 28-32, page 5, lines 1-4 and page 6, lines 1-3), utilizing the biasing force to drive the rotating blind rivet through the resultant heat weakened workpieces (page 3, lines 34-36), stopping rotation of the inserted rivet and setting the blind rivet to compress the workpieces between a deformed portion (31) of the rivet

body and a flange portion (13) (page 4, lines 11-17). Although Denham et al. does not disclose generating heat and forming heat-weakened regions in each of at least two workpieces and driving the rotating blind rivet through the resultant heat-weakened regions in each of the at least two workpieces, however Waldron et al. teaches using a rotating fastener to generate heat and forming heat-weakened regions in at least two workpieces and driving the rotating fastener through the resultant heat-weakened regions in each of the at least two workpieces, see column 1, lines 41-54. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have connected at least two workpieces in the method of Denham et al. by generating heat and forming heat-weakened regions in each of the at least two workpieces and driving the rotating blind rivet through the resultant heat-weakened regions in each of the at least two workpieces, in light of the teachings of Waldron et al., in order to reduce manufacturing cost and eliminate stress concentration associated with holes.

Regarding claims 2 and 4-6, although Denham et al./Waldron et al. does not specifically disclose a speed of rotation of the rivet or the magnitude of the biasing force, however it would have been obvious to one of ordinary skill in the art at the time the invention was made that such rotation speed and force magnitude would be a function of the materials of the workpieces to be connected, and it is within the general skill level of a worker in the art to determine the optimum rotational speed of the rivet that would generate sufficient heat to adequately locally soften the workpieces and the

effective force magnitude required to force the blind rivet through the heat weakened workpieces, see column 3, lines 22-29 of Waldron et al.

Regarding claim 3, Applicant should note that it is inherent that the biasing force in Denham et al. is less than that required to force the blind rivet through the non-weakened workpiece.

Regarding claim 7, see page 1, lines 20-21 of Denham et al. Applicant should note that the teeth provide an abrasive surface.

Regarding claims 8 and 9, see figure 2A of Denham et al.

Regarding claim 10, Applicant should note that the same tool is used to rotate and set the blind rivet in the Denham et al.'s method.

Regarding claims 20 and 21, see column 3, lines 33-44 of Waldron et al.

Regarding claims 22-25, Applicant should note that such blind fasteners are old and well known in the art.

Regarding claim 26, Applicant should note that use of a coating of abrasive material on the rivet is an obvious matter of design choice.

Regarding claims 27-29, see page 5, lines 21-22 of Denham et al. and column 3, lines 4 and 5 of Waldron et al.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (571) 272-4532. The examiner can normally be reached on M-F 9-6:30, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Essama Omgba/  
Primary Examiner, Art Unit 3726

eo  
December 6, 2009